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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
DICKEY, THOMAS L	

ART UNIT	PAPER NUMBER
2826	

DATE MAILED: 10/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/006,964	SPOONER ET AL.	
	Examiner	Art Unit	
	Thomas L Dickey	2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 July 2003*.

2a)☐ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-145* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *See Continuation Sheet* is/are rejected.

7)☒ Claim(s) *See Continuation Sheet* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/15/02, 11/4/02, and 07/28/03*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Reconsideration of Restriction Requirement

1. Applicant's petition filed 06/05/2002 has been treated as a request for reconsideration. Upon reconsideration, the restriction requirement is withdrawn. The linked claims of groups I-III will be examined simultaneously. It is understood that applicant has argued, and examiner has concurred, that method claims 1-80,122-130 and 137-139 claim the same invention as device claims 81-121,131-136, and 140-145, in as much as method claims 1-80,122-130 and 137-139 claim a process that can only be used to make the product claimed in device claims 81-121,131-136, and 140-145 and cannot be used to make any other and materially different product. Further, it is understood that applicant has argued, and examiner has concurred, that the product claimed in device claims 81-121,131-136, and 140-145 can only be made by the process claimed in claims 1-80,122-130 and 137-139 and cannot be made by another and materially different process (See MPEP § 806.05(f) for the definition of "same invention").

Oath/Declaration

2. The oath/declaration filed on 03/12/2002 is acceptable.

Drawings

3. The drawings are objected to by the PTO Draftsperson for the reasons noted on the attached Notice of Draftsperson's Patent Drawing Review, form PTO-948.

Priority

4. Acknowledgement is made of applicant's claim for domestic priority under 35 U.S.C. 119(e), through provisional applications 60/251,287 and 60/251,288 filed 12/05/2000.

Information Disclosure Statements

5. The Information Disclosure Statements filed on 02/15/2002, 11/04/2002, and 07/28/2003 have been considered.

Double Patenting

6. Applicant is advised that should claims 12-22 and 30 be found allowable, claims 49-60 will be objected to under 37 CFR 1.75 as being substantial duplicates thereof. For the same reasons, should claims 87 and 88 be found allowable, claims 109 and 114 will be objected to under 37 CFR 1.75 as being substantial duplicates thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

7. Claim 49 is objected to under 37 CFR 1.75 as being an exact duplicate of claim 30. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

8. Claims 1,6,7,12,17,18,31,36,37,50,55,56,69-71,73-75,77-79, 81,86-88,96,101, 109,114,122-136,140,142, and 144 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,11, and 18-20 of U.S. Patent No. 6,555,417. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 1,11, and 18-20 of U.S. Patent No. 6,555,417 recite a laminated MEMS wafer (LMW) and a method for making a protected MEMS structure, (a) said LMW comprising a MEMS wafer having a plurality of MEMS structure sites thereon, and said method comprising a step of preparing said wafer; (b) said LMW further comprising a static dissipative spacer layer mounted upon the MEMS wafer, the static dissipative spacer layer being perforated in areas corresponding to locations of the MEMS structure sites on the MEMS wafer (said method further comprising a step of mounting said static dissipative spacer layer); and (c) said LMW further comprising a static dissipative cover tape wafer cap mounted upon said static dissipative spacer layer to produce a laminated MEMS wafer (said method further comprising a step of mounting said static dissipative cover tape wafer cap); (d) said LMW further comprising a static dissipative contiguous tape applied to a backside

of said MEMS wafer, the backside of said MEMS wafer being a side opposite of a side having said static dissipative cover tape wafer cap located thereon (said method further comprising a step of applying said static dissipative contiguous tape either before, or after the wafer cap is mounted on the MEMS wafer). Whether the claimed spacer layer has a height to prevent damage to at least one MEMS structure (preventing damage to at least one MEMS structure being the broadest reasonable reading of the claimed function "prevent damage to the MEMS structures") due to said wafer cap coming into physical contact with said MEMS wafer and to prevent electrostatically induced damage to said MEMS wafer is a matter for conjecture. One would assume that following the method claimed in U.S. Patent No. 6,555,417 would produce at least some undamaged MEMS structures. The presumption of validity of 6,555,417 seems to compel this assumption, because without some small yield of useful devices it would appear that the '417 claimed method lacks utility. However, even if the '417 method need not produce usable devices to meet the legal definition (35 USC 101) of having utility, it would still have been obvious to modify the '417 method (if indeed, such modification was necessary) so that the spacer layer had a height to prevent damage to the MEMS structures due to said wafer cap coming into physical contact with said MEMS wafer and to prevent electrostatically induced damage to said MEMS wafer, in order to produce some yield of useful MEMS chips due to a decrease in electrostatically or physically damaged chips, to thus prevent the loss of the complete yield of the '417 method, and the subsequent economic problems associated with performing an

expensive semiconductor method without getting anything back to show for one's efforts.

9. Claims 1,6,12,17,24,31,36,43,50,55,62,81,86-88,90,96,101,103,109,114, and 116 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1,22,28-33, 35,56, and 62-67 of copending Application No. 10/006,966. Although the conflicting claims are not identical, they are not patentably distinct from each other because although claims 1,22,28-33, 35,56, and 62-67 of copending Application No. 10/006,966 are narrower than the current claims they recite, in passing, each of the limitations of claims 1,6,12,17,24,31,36,43,50, 55,62,81,86-88,90,96, 101,103,109,114, and 116 of the present application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

10. Claims 1,24,81, and 90 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 26,1,32,44, and 45 of copending Application No. 10/007,585. Although the conflicting claims are not identical, they are not patentably distinct from each other because claims 44 and 45, although narrower than claims 1,24,81, and 90 of the instant application, nonetheless recite each and every limitation of said claims.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claim Rejections - 35 USC § 112

11. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 7,18,37, and 56 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In line 1 of each the above-referenced claims "the cover tape" has no antecedent basis.

Claim Rejections - 35 USC § 102

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1,3,5,6,9,11,12,14,16,17,20,22,31,33,35, 36,39,41, 50,52,54,55,58,60,81,83,85-88,96,98,100,101,109,111,113 and 114 are rejected under 35 U.S.C.§ 102(b) as being anticipated by ROBERTS ET AL. (5,362,681).

Roberts et al. discloses a laminated MEMS wafer (LMW) and a method for making a protected MEMS structure, (a) said LMW comprising a MEMS wafer 32 having a plurality of MEMS structure sites thereon, and said method comprising a step of preparing said wafer 32; (b) said LMW further comprising a spacer layer 26 mounted upon the MEMS wafer 32, the spacer layer 26 being perforated in areas 28 corresponding to locations of the MEMS structure sites on the MEMS wafer 32 (said method further comprising a step of mounting said spacer layer 26); and (c) said LMW further comprising a cover tape wafer cap (no part #, it is the "3 mil Mylar film" mentioned first in column 7 lines 33-40) mounted upon said spacer layer 26 to produce said LMW (said method further comprising a step of mounting said cover tape wafer cap); said spacer layer 26 having a height; wherein the spacer layer 26 comprises a flexible film made of Mylar, Mylar being transmissive to UV radiation (in the near-UV range), with an adhesive medium (here, note column 6 line 10) on one side. Note figures 3,5 and column 4 lines 5-15, 42-47, column 6 lines 8-12, column 7 lines 33-40, and column 8 lines 14-20 of Roberts et al.

The applicant's claims do not distinguish over the Roberts et al. reference regardless of the functions allegedly performed by the claimed device, because only the device per se is relevant, not the recited functions of to preventing electrostatically induced

damage to the MEMS wafer and preventing damage to the MEMS structures due to the wafer cap coming into physical contact with the MEMS wafer.

Note that functional language in a device claim is directed to the device per se, no matter which of the device's functions is referred to in the claim. See *In re Ludtke and Sloan*, 169 USPQ 563 at 567, and *In re Swinehart* 169 USPQ 226, both of which make it clear that it is the patentability of the device per se which must be determined in a "functional language" claim and not the patentability of the function, and that an old or obvious device alleged to perform a new function is not patentable as a device, whether claimed using "functional language," or not. Note that applicant has the burden of proof in such cases, as the above caselaw makes clear. See also In re Schreiber, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997), for a discussion of the roles of examiner and applicant in determining when and how functional limitations distinguish a claim from prior art disclosing the same structure.

Claims 1,3,6,9,12,14,17,20,31,33,36,39, 50,52,55,58,69,70,72-74,76-78,80,81,83,86-88,96,98,101,109,111,114,140,142 and 144 are rejected under 35 U.S.C. 102(e) as being anticipated by GLENN (6,465,329).

Glenn discloses a laminated MEMS wafer (LMW) and a method for making a protected MEMS structure, (a) said LMW comprising a MEMS wafer 3 having a plurality of MEMS structure sites 2 thereon, and said method comprising a step of preparing said MEMS wafer 3; (b) said LMW further comprising a spacer layer 12 mounted upon the MEMS wafer 3, the spacer layer 12 being perforated in areas 28 corresponding to

locations of the MEMS structure sites 2 on the MEMS wafer 3 (said method further comprising a step of mounting said spacer layer 12); (c) said LMW further comprising a cover tape wafer cap 26 mounted upon said spacer layer 12 to produce said laminated MEMS wafer (said method further comprising a step of mounting said cover tape wafer cap 26); and (d) said LMW further comprising a contiguous tape 34 applied on a backside of the MEMS wafer 3, the backside of the MEMS wafer 3 being a side opposite of a side having the wafer cap located thereon (said method further comprising a step of applying said contiguous tape 34); said spacer layer 12 being a "conventional sticky tape" (note column 6 line 11) and thus comprising a flexible film with an adhesive medium on one side, wherein the contiguous tape 34 is applied to the backside of the MEMS wafer 3 after the wafer cap is mounted on the MEMS wafer 3, and before the laminated MEMS wafer (LMW) is sawn. Note figures 1,3 and 7 and column 1 line 55-61 (making clear that when Glenn writes "microcircuit" he means "MEMS"), column 6 lines 1-24, 48-51, column 7 lines 1-13 and 50-57 of Glenn.

The applicant's claims do not distinguish over the Glenn reference regardless of the functions allegedly performed by the claimed device, because only the device per se is relevant, not the recited functions of to preventing electrostatically induced damage to the MEMS wafer and preventing damage to the MEMS structures due to the wafer cap coming into physical contact with the MEMS wafer.

Note that functional language in a device claim is directed to the device per se, no matter which of the device's functions is referred to in the claim. See *In re Ludtke and*

Sloan, 169 USPQ 563 at 567, and *In re Swinehart* 169 USPQ 226, both of which make it clear that it is the patentability of the device per se which must be determined in a "functional language" claim and not the patentability of the function, and that an old or obvious device alleged to perform a new function is not patentable as a device, whether claimed using "functional language," or not. Note that applicant has the burden of proof in such cases, as the above caselaw makes clear. See also In re Schreiber, 44 USPQ2d 1429, 1432 (Fed. Cir. 1997), for a discussion of the roles of examiner and applicant in determining when and how functional limitations distinguish a claim from prior art disclosing the same structure.

Allowable Subject Matter

13. Claims 2,4,8,10,13,15,19,21,23, 25-30,32,34,38,40,42,44-48,51,53,57,59,61,63-68,82,84,89,91-95,97,99,102,104-108,110,112,115 and 117-121,137-139,141,143, and 145 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas L Dickey whose telephone number is 571-272-1913. The examiner can normally be reached on Monday-Thursday 8-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 571-272-1915. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TLD
09/04

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